CLAP

FORM N° 165

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Directive 97/23/CE

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	Quantitative requirements	
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Subject: ESR on materials - elaboration process

Question: What is the meaning of the expression "acier laminé" used in the French version Annex I § 7.1.2 first dash?

Answer:

In the French version first dash of Annex I § 7.1.2, it shall be read "laminage normalisant" instead of "acier laminé" (in English "normalized rolled").

Note: The following definitions are given in NF EN 10113-1 of June 1993 "Hot-rolled products in weldable fine grain structural steels - Part 1: General delivery conditions":

- normalizing rolling : A rolling process in which the final deformation is carried out in a certain temperature range leading to a material condition equivalent to that obtained after normalizing so that the specified values of the mechanical properties are retained even after normalizing.
The abbreviated form of this delivery condition is N.

NOTE: In international publications for both the normalizing rolling, as well as the thermo-mechanical rolling, the expression "controlled rolling" may be found. However in view of the different applicability of the products a distinction of the terms is necessary.

- thermo-mechanical rolling: A rolling process in which the final deformation is carried out in a certain temperature range leading to a material condition with certain properties which cannot be achieved or repeated by heat treatment alone.
The abbreviated form of this delivery condition is M.

NOTE 1: Subsequent heating above 580 °C may lower the strength values. If temperatures above 580 °C are needed reference shall be made to the supplier.

NOTE 2: Thermo-mechanical rolling leading to the delivery condition M can include processes with an increasing cooling rate with or without tempering including self-tempering but excluding direct quenching and quenching and tempering.

Modifications compared to the previous adopted version: Deletion of the references to WPG and editorial correction on 2004-09-16.